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UMLAUT ALTERNATION, VARIATION, AND DIALECT CONTACT: RECONDITIONING AND DECONDITIONING OF UMLAUT IN THE PREHISTORY OF THE DUTCH DIALECTS

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Alla cara memoria di mio nonno,
Antonio Buccini.

0. Introduction. The development and usage of umlaut has in many respects remained one of the central problems of the historical phonology of the Germanic languages, for despite the abundant data and numerous analyses of those data, considerable scholarly disagreement remains over the basic chronological, geographical, and structural relationships among the specific cases of the phenomenon.1 Within the broader questions of umlaut in Germanic, we find the particular problem of umlaut usage generally and i-umlaut specifically in what today constitutes the Dutch language area, the dialect data for which present us with a highly complex (indeed, in some instances even chaotic) situation:2 not only are there significant regional differences in the extent of umlaut usage, but also within given dialects, especially those of the southwest, there are highly irregular lexical distributions of fronted and nonfronted West Germanic back vowels, with only a limited correlation to the original presence of umlaut-conditioning factors.

These data have naturally received considerable attention from Dutch and Belgian dialectologists and historical linguists, but relatively little attention outside the Low Countries. This neglect is lamentable, not only because of the high quality of some of the work done on the topic, but also because the problem itself is of broader significance, certainly to Germanic and perhaps ultimately to historical phonology in general. This is, indeed, a highly complex problem and I make no attempt to consider it fully here. Rather, I will sketch the problem in general terms and discuss briefly my approach to it. Specifically, I will take up the question of umlaut in Dutch in light of recent discussions of language contact and variation, as well as the notions of 'reconditioning' and 'deconditioning,' the theoretical presentation of which is to appear in extenso in Van Coetsem and Buccini (forthcoming).

1. Umlaut and spontaneous palatalization. The major umlaut-isoglosses in the Dutch language area run from north to south and comprise two fairly
compact bundles, dividing the area into three dialect groups, as shown in maps 1, 2, and 3 (Goossens 1962:312 ff.). In the eastern group, t-umlaut has affected the West Germanic short vowels, long vowels, and diphthongs, and moreover, as in the German dialects and standard language, it plays a central role in the morphological system. This area includes almost all of Belgian Limburg, Dutch Limburg, a small part of eastern North Brabant and the eastern parts of Gelderland and Overijssel in the Netherlands. In the central dialects, we also find reflexes of umlaut in both the short and long vowels and in the diphthongs, but in this area umlaut has been lexicalized and no longer serves any significant morphological function. This central area is comprised of the Dutch-speaking part of Brabant and the province of Antwerpen in Belgium, and in the Netherlands most of North Brabant and the eastern half of the province of Utrecht as well as western Gelderland and Overijssel. Moving toward the coast, we find a transitional zone, to the west of which the West Germanic long vowels and diphthongs do not reflect any umlaut-conditioned split. This western area covers French Flanders, West and East Flanders, Zeeland, North and South Holland, and the western parts of Utrecht and North Brabant. In the cases of WGmc. ð and au, nonfronted reflexes generally obtain, and of WGmc. å we find only isolated umlauted forms and thus no clear evidence of the operation of umlaut.³ WGmc. ð similarly shows no umlaut-conditioned split but in this case, rather than consistently showing the nonfronted variant, it consistently shows the fronted one. This general fronting of å is found not only in all the western dialect area but also in almost all of the central dialect area. In the short vowels, WGmc. a regularly reflects the operation of umlaut in the west. WGmc. u also shows a split between fronted and nonfronted reflexes and in a fair number of cases the distribution corresponds to the original distribution of umlaut-conditioning factors. There are, however, numerous cases of back vowels in words originally with umlaut factors as well as fronted vowels in words without umlaut factors. These exceptions to an umlaut-conditioned split complicate the picture considerably, especially in the southwest, that is, in the dialects of East and West Flanders and to some degree Zeeland.⁴ Here the geographical distribution of fronted and nonfronted vowels varies widely from word to word.⁵

It should be noted that these modern dialect distributions have probably not changed greatly since the time of the first major attestations of Middle Dutch in the thirteenth century. For the period corresponding to the time of Old English and Old High German, we have but fragmentary evidence of Dutch, largely consisting of onomatopoeic citations, and we are therefore unable to follow the early developments directly. The earliest continuous text from the area, the Wachtendonck Psalm translations, can be located with certainty in the eastern dialect area and dated to the tenth century.

The traditional and received interpretation of these data is that, while in the eastern dialects umlaut operated fully, in the western Dutch dialects, and hence in the standard language, umlaut affected only the short vowels.⁶ The occurrence of fronted long vowels in the western dialects has then been attributed to various 'spontaneous palatalizations,' some of which spill over the zone of umlaut isoglosses into the central dialects.
As Goossens points out, in such areas where all reflexes of a given West Germanic vowel are fronted, it is, of course, impossible to map the limit of any former umlaut-conditioned split (1980:36). Such is the situation with WGMc. a, unconditionally fronted in both the western and central dialects and showing an umlaut-conditioned split only in an area roughly corresponding to the eastern dialects with morphological umlaut (Goossens 1962:319). A similar unconditioned fronting which extends across the zone of umlaut isoglosses is that of WGMc. au at the extreme southern end of the bundle from East Flanders into the adjacent portion of Southwest Brabant (Goossens 1980:37, Taeldeman 1985:200-1). Despite these two perturbations of the umlaut-isoglosses for WGMc. a and au, the basic geographical agreement of the other lines would tend to indicate that in both cases, there was formerly an isogloss running fully parallel to and near the others. That is, to the east of the cluster of umlaut lines, an umlaut-conditioned split obtained for all unumlautable vowels. In the case of WGMc. au in Southwest Brabant, this is perhaps a relatively minor point. In the case of the fronting of WGMc. a throughout the central dialect region, however, this is an important point to which I return later. As Goossens, who indicated this possibility, acknowledges (1980:28), a former general coincidence of an umlaut-conditioned distribution of a with that of the other unumlauted vowels cannot be proven, but nevertheless seems quite plausible and even likely.

Within the western dialect area, there appear some other regional unconditioned frontings. There are two such areas, one in North Holland and one in Zeeland and South Holland, where WGMc. a is consistently fronted. In the latter case, the area of unconditioned fronting extends to the isogloss for the umlaut of a, forming a bulge out from the isogloss bundle. Finally, particularly in West Flanders and to a lesser degree in the other western dialects, there is the highly variable fronting of WGMc. u (and o) mentioned above. According to the traditional view, these latter frontings were primarily attributable to the assumed general umlaut of short vowels, though the numerous exceptions to umlaut-conditioning must bring that analysis into doubt. The hypothesis that these frontings of WGMc. u were due to a so-called 'spontaneous palatalization' and not occasioned by umlaut (at least in the case of open syllable) was already advanced in 1938 by Vereecken, whoes thinking seems to have found only limited acceptance.

The failure of the traditional interpretation of umlaut in Dutch to account for the treatment of the short back vowels in the western dialects is not its only shortcoming. Indeed, the long presumed lack of umlaut of the long vowels in western Dutch focuses on a distinction which elsewhere in West Germanic is not significant in the operation of i-umlaut. Such a distinction based on vocalic length is absent from North Germanic as well, where i-umlaut also operated. If umlaut developed in such a particular fashion in western Dutch, some reasonable explanation for the deviation from the normal Germanic pattern needs to be found. Of course, an analysis of the Dutch facts which does not need to invoke an aberrant development of umlaut should be preferred, especially in light of the already dubious umlaut of WGMc. u in the west.

The most dramatic advance in the discussion of Dutch umlaut has been Goossens' suggestion that the distinction between the operation of umlaut in the western and in the central dialects does not depend on vocalic length; rather, it is based on the distinction traditionally made in Germanic historical linguistics between 'primary' and 'secondary' umlaut (1980:22 ff.). In the German context, primary umlaut refers to the fronting i-umlaut of WGMc. a in all but certain limited environments. This umlaut is consistently reflected in orthography in all but the earliest Old High German texts, that is, from about the middle of the eighth century on, as in such forms as OHG gast-gestih 'guest-guests' (Braune 1975:27-28). Secondary umlaut is the i-umlaut that only finds graphic expression gradually and much later, starting from the late tenth century and continuing on into the Middle High German period (Penzl 1949:230-33). This umlaut affects WGMc. u plus long vowels and dipthongs; for example, OHG sun-sunu, MHG sun-sine 'son-sons', OHG hûs-hûsîr, MHG hûs-hûser 'house-houses', OHG hör(ge)n, MHG hoeren 'to hear', OHG hösen (cf. Gothic Hausjan), MHG loesen 'to loosen'. It affects, moreover, WGMc. a in those environmments where that phoneme failed to undergo primary umlaut; that is, where certain consonant clusters or an intervening syllable stood between a and the umlaut inducing i or j, as in OHG gebâhti, MHG geslûhte 'family', OHG faterlia, MHG välderich 'fatherly'.

Though there has been some disagreement over the precise relationship between primary and secondary umlaut, it seems clear that phonemicization of the umlauted variants occurred in different ways in the two processes. In primary umlaut, the fronting of WGMc. a ultimately led to the merger of the umlauted allophone with WGMc. e; thus, phonemicization of the umlaut split resulted from a partial phonemic merger at a time when the umlaut-conditioning factors remained intact (Goossens 1980:22-23). The phonemicization of the umlauted allophones of the other West Germanic vowels came about only later, as the umlaut-conditioning factors themselves were reduced to zero or schwa. Thus, in secondary umlaut, phonemicization is the result of a 'distributional merger' of originally umlaut-inducing environments with no-umlaut-inducing environments (Goossens 1980:23). In the case of WGMc. a, the occurrence of secondary umlaut then indicates that in those environments where primary umlaut failed to take place, there was nevertheless an umlauted allophone, but one which did not merge with WGMc. e. Phonemicization of this umlauted allophone happened only later, with the loss of the conditioning factors.

To return to the Dutch situation, the occurrence of an isogloss dividing a western area lacking secondary umlaut of WGMc. a and an eastern area with that secondary umlaut clearly confirms Goossens' contention, especially since this line runs parallel to and near the other umlaut isoglosses dividing the western and central dialects. Given the exceptional status within Germanic of a length distinction in the operation of i-umlaut, the unclear correlation between umlaut and fronting of WGMc. u in the west, and the considerable agreement between the western umlaut isoglosses and the primary/secondary umlaut distinction, the traditional handbook view of umlaut in Dutch must once and for all be abandoned.

The apparent absence of umlaut in western Dutch therefore does not necessarily reflect a lack of the phonetic tendency to assimilate accented vowels to following high front vowels and job that we find in all the other Germanic languages; rather, it betrays a failure to phonemicize umlauted and
alien to continental West Germanic. The Frankish group of dialects, to which Dutch belongs, generally fails to show Ingwæonic features and clearly belongs to the continental variety of West Germanic. Nevertheless, we find considerable traces of these Ingwæonic features throughout the coastal dialects. Although the thickest concentration of these features is directly along the coast in West Flanders, Zeeland, and Holland, a number of these features occur throughout the western dialect area and to a lesser extent beyond. Thus, it cannot be doubted that Ingwæonic and Frankish dialects were in contact in this coastal region. What must be determined is the time and nature of that contact.

Though this is not the place for detailed study of Germanic settlement of the Low Countries, we must make the following points. Frankish incursions into Roman Gaul indicate the presence of Franks near the Rhine and Maas rivers already in the third century. These incursions culminated with the invasion and conquest of northern Gaul by the Salian Franks in the latter half of the fifth century after they had been settled in the area of Limburg and eastern Brabant. As the Salian Franks at least in part vacated their old settlement, new Frankish waves moved into the region behind them.

During this same period, Ingwæonic groups, originally located in Jutland and northwestern Germany, settled in England. Whether this invasion of England was carried out directly from their homeland or from intermediate stopping points along the Dutch, Belgian, and northern French coasts is unknown, though for a number of reasons, the latter seems likely. In particular, in the Notitia Dignitatum (early fifth century), the two sides of the English Channel are described as the 'Litus Saxonicum' or 'Saxon coast.' Toponymic evidence from the Pas-de-Calais, moreover, confirms the former presence of a significant Saxon colony there (Mansion 1932). A number of place-names in West Flanders also show striking parallels with English counterparts in both form and phonological development (Taeldeman 1982). For the coast north of Flanders as well as the whole north of the Netherlands, little direct evidence survives from this period. Two centuries later, however, during the Merovingian period, this northern area was controlled by the Frisians. Comparing the scant historical evidence with the later geographical distribution of Ingwæonisms in Dutch dialects, we see that there is general agreement; the Ingwæonisms are limited to the westernmost dialects, and, in so far as specifically Frisian Ingwæonisms occur, they are confined to the dialects of Zeeland and Holland. Since no Frisian- or English-like dialect survives in the western Dutch area, Frankish must have completely supplanted Ingwæonic, a process which no doubt commenced in the seventh and eighth centuries as the Franks expanded their political hegemony to the north at the expense of Frisians and Saxons in northern Germany.

This supplanting process, of course, represents a case of language contact. Frankish/Ingwæonic contact is generally believed to have resulted in a series of essentially unrelated relic forms and perhaps a vaguely formulated tendency toward palatalization. But this contact, responsible for extinction of west coast Ingwæonic dialects, was surely not limited to a simple process of borrowing. If it did in fact have a lasting phonological effect, that effect must be examined in terms of the interaction of differing linguistic systems. In short, we must regard this contact as having had a structural dimension.

2. Ingwæonic and Frankish. Within the West Germanic group, scholars have long recognized a cleavage between the North Sea coast and English dialects on the one hand, and those further inland on the continent, on the other. Though objections have often been raised to the name, the former group has traditionally been called 'Ingwæonic' in Dutch linguistics. While English and Frisian are the only surviving representatives of Ingwæonic, there are strong indications that closely related dialects were once spoken all along the coast from northern France to Denmark. The term Ingwæonic is used then in reference to a specific set of features shared by these dialects but

nonulauted allophones with the reduction of the umlaut-conditioning factors. This absence of secondary umlaut appears to flow from a failure of these allophones to become phonetically distinct enough to survive independently, perhaps (though not necessarily) because of early loss of the conditioning factors. However, since there is evidence, particularly in the southwest dialects, that this reduction did not take place (Goosens 1980:39-40), there is no obvious explanation for the apparent reluctance of the allophones to differentiate further.

Goosens (1980:40-41) offers a tentative explanation for the failure of secondary umlaut and the spontaneous frontings in the west. At the heart of it is the idea that prior to reduction of the umlaut-conditioning factors, there must already have been a tendency in some parts of the west to front somewhat the nonulauted allophone. Both umlauted and nonumlauted allophones thus remained fairly close. With the loss of the umlaut factors in these areas, merger resulted in a fronted vowel, while in other parts of the west merger favored the nonfronted pronunciation. Further distortion of any umlaut-conditioned distribution would come about through the process of analogical leveling in morphological paradigms. Finally, one must not overlook dialect contact between areas with different merger patterns as well as with eastern dialects where secondary umlaut operated normally. In addition, contact with coastal dialects, in which secondary umlaut also seems to have functioned, further contributed to the emergence of idiosyncratic distributions of fronted and back vowels. I will return to the topic of these coastal dialects below.

This proposal, while admitting the role of dialect contact in the spread of irregular or idiosyncratic distributional patterns, nevertheless is founded on the assumption that the dialects involved all developed along essentially direct, though differing, lines. That is, the effects of dialect contact seem limited to borrowings. (Though, to be fair, Goosens does not discuss the question in detail.) In any event, on the assumption that western developments do run along a direct line, we must charge failure of secondary umlaut to a relatively weak assimilation of the accented vowel to the umlaut factor. While such a development is by no means unimaginable, it does again set the western Dutch dialects apart from all the rest of Germanic. For Germanic dialects, left to their own devices, all develop secondary umlaut. From this perspective, the possibility that failure of secondary umlaut may be due to language contact seems worthy of pursuit, especially since (a) there is independent evidence for such contact and (b) we are quite well informed about the contacting languages.
To consider the nature of this contact, I will employ the distinction in transfer types proposed by Van Coetsem 1988. He distinguishes between the process of borrowing, in which a speaker acts upon his own dominant language by incorporating into it elements from some other language. In this process, the elements transferred generally belong to the least stable linguistic domains, chiefly secondary vocabulary. In contrast to the process of borrowing, it is that of 'imposition,' in which the speaker transfers elements from his own dominant language into another target language. In imposition, it is from the most stable linguistic domains that material tends to be transferred; that is, in speaking a foreign target language, the speaker will tend to preserve certain stable features from its own language, such as articulatory habits. In addition to changes brought about through imposition itself, the target language will also be subject to the process of reduction (or 'simplification') as well as accelerated internally induced change. As the acquisition process continues, these contact-related effects will decrease. To return to the case at hand then, we can say that there must have been a period, during which Ingwenic speakers acquired Frankish, and in doing so imposed onto their Frankish speech certain stable elements from their native Ingwenoic. In so far as the dialects of the western area are unquestionably Frankish, the acquisition process was carried out to a high degree.

3. Morphological and phonological aspects of the contact. The logical dating for this contact, as mentioned earlier, is in the seventh and eighth centuries. While we have very little direct evidence for the dialects involved during this period, we can make some reasonable hypotheses about them, based on the other, closely related and better attested West Germanic dialects. Focusing now on the southwest area, where there is indisputable evidence for settlement by groups who also populated England, we can surmise that the dialect spoken there was structurally quite similar to those spoken across the channel.

One of the most striking features of Old English is very early and thorough operation of i-umlaut. Indeed, in the earliest English texts, dating from around A.D. 700, i-umlaut appears to have fully run its course, no longer constituting a 'productive sound change' (Toon 1983:132, cf. Brunner 1965:68ff.). In terms of our discussion of umlaut in German and eastern Dutch, secondary umlaut had already been carried out in English by the end of the seventh century at the latest, with reduction of the umlaut-conditioning factors and phonemicization of the umlauted allophones. Even allowing for a lag in graphemic representation, the much later attestation of secondary umlaut in continental West Germanic in the tenth century indicates a significant difference in the rate of development of i-umlaut in the two areas. It should be noted too, that the earliest Dutch text, the tenth-century Wachtendonck psalm translations from the eastern dialect area, does show the operation of secondary umlaut, but it is not consistently represented. Thus, umlaut in the eastern Dutch area seems to have developed at approximately the same rate as in the other Frankish and continental West Germanic dialects.

The early operation of umlaut in English seems also to have been accompanied by a stronger assimilation of the accented vowel to the umlaut-conditioning factor. Throughout the English dialects, the umlauted back vowels began to unround and to merge with the front vowels in the course of the ninth century, though there was certainly some variation in the development of this change, both according to geographical region and to phonetic environment. Evidence for the same change in contemporary Frisian leads us to expect a similar development of early umlaut with a tendency to unrounding in the Ingwenoic dialect of Flanders. Traces of such a development have been well documented for the area and, though concentrated in West Flanders, they occur throughout the western dialects. In Flemish texts from the Middle Dutch period, a number of common words show both umlaut and unrounding and occasionally alternate with nonumlauted forms.

Figure 1. Examples of umlauted and unrounded WGmc. u in western Middle Dutch.

<table>
<thead>
<tr>
<th>Middle Dutch</th>
<th>Old High German</th>
<th>Old English</th>
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<tbody>
<tr>
<td>stic, stuc, stucke</td>
<td>stucchi</td>
<td>styce 'stick'</td>
</tr>
<tr>
<td>pit, pite, put, putte</td>
<td>pfuzzi</td>
<td>pytt 'pit'</td>
</tr>
<tr>
<td>ric, rigge, rugge</td>
<td>rucki</td>
<td>hrycg 'ridge'</td>
</tr>
<tr>
<td>brigghe, brugghe</td>
<td>brucka</td>
<td>brycg 'bridge'</td>
</tr>
<tr>
<td>evel, ovel, oevel</td>
<td>ubil</td>
<td>yvil 'evil'</td>
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</table>

These western words that show fronting and unrounding of WGmc. u with one exception originally had umlaut-conditioning. Given their phonological shape and geographical distribution, they must be seen as Ingwenoic relics.

Several of these words also show apocope of the final vowel, which, from the stand point of Middle Flemish and, for that matter, modern Flemish dialects, is an uncharacteristic development. This apocope seems to confirm their Ingwenoic origin. We can then also reasonably consider cases of unumlauted WGmc. â found in the west and perhaps even the handful of cases of umlauted and unrounded WGmc. û (Schönfeld-Van Loey 1970:32) as native Ingwenoic residue (Verstegen 1938).

Ingwenoic-Frankish contact in the seventh or eighth century involved a dialect having already undergone strong reduction of unaccented vowels and secondary umlaut (probably with incipient unrounding in certain environments) and a dialect in which reduction had not yet taken place and in which only primary umlaut had operated. Moreover, in the Ingwenoic dialect, umlaut served an important morphological function, while in the Frankish dialect, inflexional suffixes were still the primary morphological markers. In attempting to acquire Frankish, the Ingwenoic speaker was faced with a difficult task. First, he was confronted with various linguistic elements (vocabulary items, morphemes, etc.), for which there were no precise counterparts in his own language. Comparing early Frankish texts from Germany with Old English gives us some idea of the degree of difference encountered. Second, he was likely confronted with a number of unfamiliar phones as well as inconsistent phonological correspondences in shared vocabulary. In addition, depending on the degree to which Frankish had developed distinct umlauted allophones, he was perhaps faced with an
automatically conditioned phonological rule whose operation was opaque to him. Acquisition of such a rule is extremely difficult if not impossible, as shown by such sociolinguistic studies as Payne's (1980) of Philadelphia English. In addition, he had to master a morphological system in which the distinct quality of unaccented vowels had an important function. The acquisition of new distinctions in unaccented position is also difficult, as evidenced by, for example, Neapolitan dialect speakers' pronunciation of standard Italian. In short, we might expect the Ingwaéonic speaker to impose his reduced realization of unaccented vowels on his Frankish speech.

In addition to indirect phonological interference with the Frankish morphological system, the clash of the two systems themselves must also be considered. The predictable result of contact between related dialects with contrasting morphology is a process of variant reduction or 'simplification' which generates greater morphophonemic regularity, as shown by Trudgill for a case of dialect contact in Norway (1986:102-6). A transparent historical case of such simplification within Germanic involves northern English dialects in contact with Old Norse. The effects of that contact, described by O'Nei (1978), offer a striking parallel to the development of Frankish in the west. In both cases, there is a drastic reduction of inflectional suffixes down to a rudimentary set of endings (O'Neil 1978:263). In particular, we note the reduction of nominal markings in western Dutch and the striking spread of the specifically Ingwaéonic -s plural marker. Indeed, absence of schwa-apocope in Flanders, a feature which superficially looks quite 'un-Ingwaéonic,' can be attributed to the unaccented vowel's important role as one of those rudimentary endings. In addition to a neutralization of inflexional endings, almost all traces of stem allomorphy, in many cases caused by umlaut, were also abandoned in northern English in reaction to contact with Norse (O'Neil 1978:262). And again there is a clear parallel in the western Frankish dialects, where even the alternations arising from primary umlaut were already leveled before the Middle Dutch period (Goossens 1980:42).

Whether this morphological simplification brought about or resulted in a disruption of the conditioned umlaut allomorphy cannot be determined, owing to lack of data from the actual time of the contact. And perhaps the distinction is irrelevant, for, comparing western Dutch dialects to those of the central and eastern areas, we discern a gradual decrease in the complexity of the phonological system that generally parallels the decrease in morphological complexity from east to west.

As a case in point, consider the dialectal treatment of the West Germanic diphthongs, which in Common Germanic had undergone an allophonic split according to either height of the following unaccented vowel or quality of the immediately following consonant (cf. note 9). The prevalence of either vocalic or consonantal conditioning varied considerably from dialect to dialect, and within individual dialects, the two kinds of conditioning could cooccur and 'cross' or overlap. Focusing on the southern area, we find that in the southeastern Dutch dialects, treatment of these diphthongs by large corresponds to that found in Old High German and in particular the Middle German (Frankish) dialects (Goossens 1974:35). In this eastern area (roughly speaking, Limburg), the West Germanic alternations [ao ~ au] and [ae ~ aɪ] are reflected as o ~ au and e ~ ei according to the following consonantism, while the alternation [εo ~ iu], as elsewhere in West Germanic, seems predominantly conditioned by the following vocalism. In the central southern area (roughly Brabant), there is no reflex of the [ao ~ au] alternation whatsoever, while [ae ~ aɪ] is reflected as an alternation of e ~ ei, but here conditioned primarily by the following vocalism. In the far west (roughly West Flanders), both West Germanic alternations have been given up, with generalization of the monophthongal reflexes o and e. In the case of WMc. [εo ~ iu], the southeast maintains a distinction, while in Brabant a unitary treatment prevails. Again, in the southeast the alternation has been completely lost.

### Figure 2. Dialectal treatment of 'breaking' conditioned alternations.

<table>
<thead>
<tr>
<th>WMc.</th>
<th>Western</th>
<th>Central</th>
<th>Eastern</th>
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<tbody>
<tr>
<td>ao</td>
<td>o</td>
<td>o:~ o:</td>
<td>o:~ ò:</td>
</tr>
<tr>
<td>au</td>
<td>e:</td>
<td>e:</td>
<td>a:~ ò:</td>
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<tr>
<td>ae</td>
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<td>ei</td>
<td>e:</td>
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<td>ai</td>
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<td>e:</td>
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<td>eo</td>
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<td>uu</td>
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While in many instances these allophonic variants were potentially subject to paradigmatic levelling, analogy alone cannot explain the regularity of the collapse in the southwest. Again, we find an apparently parallel situation in the treatment of diphthongs in the Norwegian dialect contact described by Trudgill (1986:105), in which contact between a dialect with a system of five diphthongs and dialects with only four has resulted in a simplified threefold diphthong system. Trudgill indicates that the new 'simpler' system, with fewer contrasts, has won out, again probably through incomplete accommodation and, crucially, simplification during child language acquisition (1986:105). If we consider the possible added complication of conditioned alternations, differing in detail between the two contacting dialects, the likelihood of simplification in child acquisition seems even greater than in the Norwegian case, where such factors seem to be absent.

A further twist to this western predilection for monophthongization of the West Germanic diphthongs involves their original treatment in the coastal Ingwaéonic dialect itself. The attested major Ingwaéonic dialects tend toward unitary treatment of the old diphthongs, though this is not always true (e.g., Old Frisian æ/e for WMc. aɪ). In Old English, the treatments of WMc. aɪ and au do not reflect the conditioning factors discussed above. In addition, the split between eo and iu, originally maintained in Old English, was to some degree unstable, and already in the ninth-century charters from Kent, the two diphthongs have probably merged (see Campbell:280, 293). In our contact situation then, a possible unitary (and monophthongal) treatment in the coastal Ingwaéonic dialect may have served as a model for the (imposed) simplification process in the acquisition of Frankish by Ingwaéonic speakers.
For both the vocally and consonantly conditioned alternations in the diphthongs and that of the secondary ü-umlaut conditioned alternations, I propose that the special status of the western Dutch dialects lies in an especially weak tendency to assimilate accented vowels to unaccented vowels or consonantal environments. Rather, it lies in the disruption of phonetically conditioned processes in Frankish by Ingwaenic speakers as a result of their acquisition of Frankish. Whatever the phonetic nature of the alternations in Frankish, their conditioning was opaque to the Ingwaenic speaker. Indeed, even those unaccented conditioning factors themselves were foreign to a speaker of a dialect in which reduction had already largely neutralized vocalic distinctions in final syllables. Given the lack of this conditioning, as well as phonetic and distributional discrepancies between the contacting dialects, there must have been a period in which significant phonological variation prevailed. This variation was then subject to further developments, most especially simplification, as this 'Ingwaenic' Frankish was acquired by subsequent generations. Thus, we might interpret the western tendency to favor the nonumlauted allophones as the result of a sharp difference between the contacting dialects' unumlauted allophones; for example, an Ingwaenic e corresponding to a Frankish ə. Thus, a contrast between an Ingwaenic alternation for/fer 'foot/feet' and Frankish for/fer, could most easily be reconciled by neutralizing the shared elements; thus, for/fer. By means of this process, ə might ultimately have been lost and the unrounded variant maintained only in isolated relic words if at all.

In child language acquisition, these alternations may also have been subject to reinterpretation on phonological grounds; that is, they may have been 'reconditioned' (Van Coetsen-Buccini, forthcoming). Specifically, when the fricative or loss of the umlaut-conditioning final vowels resulting from Ingwaenic imposition, speakers of early western Frankish may have reanalyzed the alternations as being conditioned by certain consonantal environments. The confused reflexes of WGe, u in Flanders, for which there are indications of consonantal conditioning, should perhaps be examined in this light. Though tendencies toward regularization through consonantal conditioning may well have arisen, the process would most likely be noticeable as well as local variation. We might compare this situation with that described by Payne for the raising of æ in Philadelphia English, where we find a lexical distribution of raised and nonraised highly reminiscent of the Flemish treatment of WGe, u. Further contact between dialects which had reconditioned the umlaut alternation in slightly different ways would result equally in the appearance of irregular lexical distributions, or, as discussed above, in a simplification of the variation through generalization of one or the other variant. This process might well account for the sundry 'phonemic palatalizations' in the west. Moreover, in the case of the fronting of WGe, ə, there is evidence for consonantally conditioned extension of the fronted variant preceding the ultimate generalization, a step which we might call 'deconditioning'.

The results of these tendencies are reflected in the overall simplicity of the western vocalic system in comparison with the eastern, as seen in Goossens' reconstructions of the Middle Dutch vocalic systems.

Figure 3a. Middle Dutch short vowel systems (Goossens 1980:49).

<table>
<thead>
<tr>
<th>Western and West Central</th>
<th>East Central and South Eastern</th>
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<tbody>
<tr>
<td>i</td>
<td>ü</td>
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<tr>
<td>e</td>
<td>o</td>
</tr>
<tr>
<td>a</td>
<td>ë</td>
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</tbody>
</table>

Figure 3b. Middle Dutch long vowel systems (Goossens 1980:61).

<table>
<thead>
<tr>
<th>Western</th>
<th>Central</th>
<th>Southeastern</th>
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</thead>
<tbody>
<tr>
<td>i</td>
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The relative phonological simplicity of the southwestern dialects goes hand in hand with certain rather complicated or irregular lexical distributions, while the complexity of the southeastern phonological system dovetails with generally more regular local developments. Furthermore, this phonological simplicity is correlated with a relative morphological simplicity, as discussed above.

4. Conclusion. Our interpretation of the development of umlaut in Dutch is founded largely on the structural analysis by Goossens. The ultimate difficulty in motivating the failure of secondary umlaut in the west by purely language-internal developments, however, is evident, and at least some appeal to dialect contact must be made. Casual or superficial contact, wherein transfer through borrowing predominates, cannot account for this extraordinary failure of umlaut nor for the generally sharp contrast between the western and eastern Frankish dialects in the Dutch language area. Thus, both the linguistic and historical evidence for an originally Ingwaenic-speaking population in the west indicates the need for a serious and structurally oriented analysis of Frankish/Ingwaenic contact.

In several of his numerous studies on Ingwaenic elements in Dutch, Hecema examined the structural aspect of the contact with Frankish. Due to the state of language contact studies at the time, however, his formulation of how linguistic elements were transferred, particularly in the phonological domain, was often vague or lacking. The imprecision of the traditional concepts of 'substrate' and, especially popular in Dutch studies, 'expansion' has long been the bane of contact-based theories of phonological developments (see Van Coetsen's 1988 introduction). Despite the undeniable occurrence of language contact and its potential for far-reaching effects on linguistic structures, the muddle of such terms as 'interference' and 'borrowing,' used with only minimal reference to the agent of the transfer and the place of the transferred element in a linguistic system, has convinced many linguists that contact-based theories are less scientific than explanations of developments.
through purely language-internal structural motivations. Such caution is justified, in light of certain tenuous and even absurd theories invoking language contact that have been proposed, as well as the virtual impossibility of proving beyond all doubt that language change in the past was the result of contact and not internal structural development. All language change, including contact-induced change, is ultimately integrated into linguistic structures and, in a certain sense, must be internally motivated. Nevertheless, the limitations of past contact models should not inhibit us from applying better formulated models to those cases where there is strong external evidence for important linguistic contacts. In this regard, some of Heeroma's unappreciated ideas may yet be vindicated.

Our explanation of the development of umlaut and spontaneous fronting in Dutch is, as Goossens also says of his own explanation of these phenomena, highly conjectural. Given the paucity of data for the early period of development, any explanation must be speculative. Nevertheless, by applying some of the principles derived from the observation of other languages in contact to Frankish and Ingwæonic, genuine advances can be made in reconstructing the early history of Dutch.

Notes

I would like to thank Prof. Jay Jasanoff for offering helpful criticism and comments on a number of points in this paper. I would also like to thank my good friend, Thomas Young, who also offered valuable comments. Finally, I am indebted to Prof. Frans van Coetsen, with whom I am currently working on the development of the notions of 'reconditioning' and 'deconditioning,' the idea of which goes back to Van Coetsen 1968. It was originally through collaboration on that project that I came to reconsider the topic of umlaut in Dutch and I have benefited greatly from our exchange of ideas. Full responsibility for any shortcomings or inaccuracies in this paper, however, lies solely with the author.

1. For an overview of the various major theories on umlaut in Germanic, see Sonderegger 1959.
2. Goossens thus describes the pattern of isoglosses of fronted and nonfronted reflexes of WGe. u in the western dialects (1960:34).
3. The occurrence of some words in the west with umlauted WGe. d has been discussed by Verstegen 1938.
4. Important detailed studies of the reflexes of WGe. u are Vereecken 1938, Vangassen 1963, and Taedelmen 1971.
5. For the variation in geographical distribution, see the maps accompanying Taeldeman 1971. Of course, while there is an important geographical aspect to this variation, the isoglosses as drawn may well mask areas within which the treatment of individual words may be variable, as Trudgill cautions in a different context (1984:95).
6. Such is the opinion expressed in the standard historical handbook, Schönenfeld-Van Loey (1970:44f.), as well as in Van Bree (1977:184-86), who sees a chronological difference between the umlaut of short and long vowels, the latter then failing to spread to the western part of the Dutch language area. Taeldeman also takes up the short/long distinction in his study on the reflexes of WGe. u (1971:168-69). See also Goossens (1980:21n.2).
7. Willeyns, in his study of the west Flemish dialect of Brugge, seems by and large to find support for Vereecken's view in his data (1971:151-55). Taeldeman (1971), on the other hand, disagrees on a number of points both with Vereecken and with Willeyns. Goossens (1980:36) clearly agrees with Vereecken, at least in so far as he feels the occurrences of fronted u and o in the southwest have not yet been adequately accounted for and in any event cannot be simply explained by umlaut (1980:38).
8. The Common Germanic raising and lowering changes (early umlaut and breaking) affected not only short vowels, as well as the then probably biphonematic diphthongs (see Van Coetsen 1968 and 1970:46ff.). If we assume that the development of umlaut in Germanic was essentially continuous, as seems reasonable, there must have been a transitional period between the earlier raising/lowering umlaut (breaking) and the later fronting and backing umlaut that we find in North and West Germanic. During that time, there might well have been a period when incipient fronting and backing umlaut would have affected only the short vowels. Since we find no evidence for such a transitional stage in the Germanic dialects (unless, of course, one considers western Dutch as such), we must assume that it was at best short-lived.
10. Objections to the term were raised again recently by Laur (1984), who discusses the application of the name at some length. While none of the terms for this dialect grouping is wholly satisfying, we choose the term 'Ingwæonic,' following the usage established by Wrede, Frings, and Heeroma. For an overview of the Ingwæonic question and numerous references, see Marky 1976.
11. In this regard, one could conceivably establish a hierarchical ranking of more and less specifically Ingwæonic features. For example, the palatalization of k and g before front vowels is more specifically Ingwæonic than the conflation of dative and accusative in personal pronouns or the loss of final -z in pronominal forms.
12. There have been numerous studies of the Dutch Ingwæonicisms. A brief introduction to the topic may be found in Schönenfeld 1970:xxxiii-xxxix. For the geographical distribution of some of the Ingwæonicisms, see Daan-Francken 1972 and 1977. See also Taeldeman 1982 for a list of major Ingwæonicisms along with references and maps.
13. The exact location of this area, 'Toxandria,' has been disputed. Here we follow Boeren 1947. It is in any event clear that their settlement was primarily in the eastern half of the Dutch language area.
14. For a discussion of Frisian and non-Frisian Ingwæonicisms, see Miedema 1971.
15. An Ingwæonic tendency toward palatalization surviving and operating in the western Frankish dialects has often been claimed, as in Schönenfeld-Van
Loey 1970:43. Structurally oriented analyses of Frankish Ingweonic contacts have been undertaken, most notably by Heeroma. See the conclusion below.

16. For a detailed discussion of the variable factors in imposition (source language agentivity), see Van Coetsem 1988: chap. 3.

17. Given Gysseling's (1960) evidence for Frisian, which indicates secondary umlaut and unrounding as early as the beginning of the tenth century, precocious development of umlaut in all of Ingweonic seems probable. This, of course, long been recognized, though it by no means follows that umlaut originated in and spread from Ingweonic to the other Germanic dialects.

18. The original text seems to have belonged to a period when the graphemic system was just starting to reflect secondary umlaut. The effect of scribal tradition, of course, could have significantly delayed the development of new graphemes for existing umlauted phonemes. For details, see Kyes 1967 and Quak 1983.


20. To see Verstegen 1943 for discussion and maps. See also Taeldeman 1971. The evidence in this umlaut conditioning factor is the preposition ip, corresponding to standard Dutch ap, which occurs in a large part of West Flanders. The exceptional development in this word is most likely due to its variable accentuation, a not uncommon phenomenon with prepositions and pronouns.

N.B. There also occur a few cases of umlauted and unrounded WGmc. ë. See Taeldeman 1982:280 and below.

21. Heeroma, though accepting the traditional view of a length distinction in the operation of umlaut in the Dutch language area, came to a similar conclusion: 'Es muß eine Zeit gegeben haben--sagen wir zwischen 500 und 800--in den angloisischen Südwesten bereits den Umlaut der langen Vokale kannte und der fränkische Südosten den Umlaut der langen Vokale wieder verlor, ausser in einigen angloisischen Relikten..." (1964:21). He failed to explain how and why Frankish exercised this influence, which is not surprising given the inevitable confusion arising from an attempt to apply the length distinction in umlaut to the data.

22. Neapolitan has undergone a sweeping reduction of final vowels. Morphological categories are largely indicated through umlaut or 'metaphonic' alternations of the accented vowels. In speaking the Tuscan standard, which maintains a four-vowel system in unaccented position, Neapolitans tend to reduce all final vowels to schwa or zero.

23. For discussion of the interrelation of these Common Germanic vocalic changes, see Van Coetsem 1968. In specific application to the Dutch area, see Goossens 1974:31-35.

24. For a discussion of the treatment in the west, see Heeroma 1938. Further discussion and maps are to be found in Daan 1937 and Brouwer 1938.

25. The Ingweonic tendency toward monophthongization of the WGmc. diphthongs was pointed out to me by Prof. van Coetsem.

26. The side-by-side presence of Frankish, Ingweonic Frankish, and Ingweonic likely endured for some time in the west. The existence of a sociolectal split in the area has already been proposed by Schönfeld-Van Loey:

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'Wat Vlaanderen, Zeeland, en het grootste deel van Holland betreft, kreeg...het Frankisch de boventoon, toen een Franckische bovenlaag over de Ingweonse onderlaag heenschool' (1970:xxxii). This continued contact was a further source of variation within the community.

27. In a transitional zone between Brabant, where the fronting of ë is general, and Limburg, where it is conditioned only by umlaut, the fronted variant was formerly found not only in umlaut environments but also generally before dental consonants (Goossens 1962:319).

28. A six-height vowel system is admittedly an abstraction. What this representation does show is the number of etymologically distinct lexical groups that have been maintained in the southeastern dialects.

References


GENETIC CLASSIFICATION, CONTACT, AND VARIATION

Bernard Comrie
University of Southern California

Introduction. The year 1987 saw the publication of two important contributions to the genetic classification of the world’s languages: Greenberg 1987 and Ruhlen 1987. Greenberg 1987 is primarily an innovative classification of the indigenous languages of the Americas. My interest here, however, is not in the details of the classification of indigenous languages of the Americas, but rather in his essay ‘The principles of genetic linguistic classification,’ which forms chapter 1 of the book (1-37). Ruhlen 1987 is a classification of the world’s languages according to the methodology set out by Greenberg, and is therefore especially useful as an illustration of Greenberg’s methodology as applied to those parts of the world for which Greenberg has not yet published classifications. The present paper is in large measure a critical response to the principles of genetic classification that are explicit or implicit in these two works, with particular attention to the genetic classification of languages of those parts of the world in which I am myself particularly interested.

As a starting point, it will be useful to review the range of possibilities generally entertained for explaining similarities between languages, namely: chance, universal principles of language, borrowing, and genetic affiliation.

Chance can, by definition, never be excluded completely, though if the number of similarities between two languages is high there is little likelihood of this situation having arisen purely by chance. One might assume that some assessment of the expected level of chance similarity between languages could be made by comparing pairs of languages that are known to be genetically unrelated and which have not been in contact. In fact, this procedure turns out to be more complex. First, one must exclude similarities that are due to universal principles of language, and work in this area is hardly sufficiently advanced for us to be able to do this with any high degree of reliability. Second, there can never be a guarantee that any two languages are genetically unrelated, so at best one can operate with the belief that the languages are genetically unrelated; unfortunately, mere belief is unlikely to be convincing, given that the possibility of all the world’s languages being genetically related is currently being given serious attention by some linguists (Ruhlen 1987:260-61).

Under ‘universal principles of language,’ I include not only those properties that are common to all languages but also general tendencies, for instance the kind that are found as innovations in a range of languages independent of their genetic affiliation or areal contact. A trivial example